## **EAST Search History**

## EAST Search History (Prior Art)

Ref#	$\operatorname{Hits}$	Search Query	$\mathrm{DBs}$	Default Operator	Plurals	Time Stamp
L1	331	(604/141,69).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/08/11 11:55
L2	8	1 and propellant and housing and opening and piston and sleeve	US-PGPUB; USPAT	OR	OFF	2010/08/11 11:56
S1	1	"6616627".pn.	US-PGPUB; USPAT	OR	OFF	2007/04/24 13:05
S2	5	("3802430"   "5304128"). PN. OR ("6616627"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/04/24 13:54
S3	8	("3802430"   "5304128"   "6165155"   "6258063"   "6270473"   "6406455"   "6592542"   "6616027"). PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/04/24 13:55
S4	67	(604/69).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/04/24 14:17
S5	409	(604/68,70).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/04/24 14:18
S6	380	S5 not S4	US-PGPUB; USPAT	OR	OFF	2007/04/24 14:41
S7	27	stigell.xa.	US-PGPUB; USPAT	OR	OFF	2007/04/24 14:42
S8	276	propellant and wire and battery and inject\$	US-PGPUB; USPAT	OR	OFF	2007/04/24 14:48
S9	266	S8 not S4	US-PGPUB; USPAT	OR	OFF	2007/04/24 14:48
S10	218	S9 and contact	US-PGPUB; USPAT	OR	OFF	2007/04/24 14:51
S11	64808	"604"/\$.ccls.	US-PGPUB; USPAT	OR	OFF	2007/04/24 14:51
S12	32	S10 and S11	US-PGPUB; USPAT	OR	OFF	2007/04/24 14:57
S13	228	(604/141).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/04/24 15:37
S14	454	S11 and propellant	US-PGPUB; USPAT	OR	OFF	2007/04/24 15:37
S15	112	(604/143).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/04/24 16:03
S16	187	(604/145-147).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/04/24 16:28

S17	7	(US-20020004639-\$).did. or (US-6616627-\$ or US-7160265-\$ or US-3335722-\$ or US-3802430-\$ or US-4089334-\$ or US-4124024-\$ or US-4652261-\$ or US-5179022-\$ or US-6096002-\$ or US-6264629-\$ or US-6471669-\$ or US-6572581-\$ or US-6641554-\$ or US-6689093-\$ or US-2680439-\$ or US-5312335-\$ or US-5503627-\$ or US-5891085-\$ or US-6080130-\$ or US-6824526-\$ or US-5860957-\$ or US-6045534-\$ or US-6986754-\$ or US-5919159-\$ or US-4561856-\$ or US-5891086-\$).did.	US-PGPUB; USPAT	OR	OFF	2007/04/24 16:34
S18	1	S1 and vent\$	US-PGPUB; USPAT	OR	OFF	2007/04/24 16:34
S19	16	("3308818"   "4089334"   "5080648"   "5399163"   "5499972"   "5503627"   "5503628"   "5836911"   "5891086"   "5938637"   "6096002"   "6309371"   "6572581"   "6616627"   "6620135").PN. OR ("7160265").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/04/24 17:12
S20	15	("2605763"   "2680349"   "4596556"   "5024656"   "5520639"   "6096002"   "6135979").PN. OR ("6620135").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/04/24 17:37
S21	56	(604/184).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/04/25 10:11
S22	54	(604/226).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/04/25 10:15
S23	1	"6045534".pn.	US-PGPUB; USPAT	OR	OFF	2007/04/25 12:03
S24	28	("3840009"   "3977402"   "4102332"   "4141359"   "4250878"   "4312347"   "4326522"   "4425117"   "4439197"   "4457752"   "4564363"   "4968297"   "5135479"   "5167625"   "5196002"   "5522798"   "5527288"   "5582593"   "5616132").PN. OR ("6045534").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/04/25 10:25
S25	864	(604/890.1).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/04/25 10:25

S26	25	S25 and propellant	US-PGPUB; USPAT	OR	OFF	2007/04/25 10:31
S27	1	"5891086".pn.	US-PGPUB; USPAT	OR	OFF	2007/04/25 11:10
S28	1	"4878892".pn.	US-PGPUB; USPAT	OR	OFF	2007/04/25 12:03
S29	1	"5135479".pn.	US-PGPUB; USPAT	OR	OFF	2007/04/25 12:56
S30	1	"5674198".pn.	US-PGPUB; USPAT	OR	OFF	2007/04/25 12:56
S31	16	"6485500"	US-PGPUB; USPAT	OR	OFF	2007/04/25 13:45
S32	1	"6485500".pn.	US-PGPUB; USPAT	OR	OFF	2007/04/25 16:02
S33	1	"3618637".pn.	US-PGPUB; USPAT	OR	OFF	2007/04/25 16:07
S34	1	"6695807".pn.	US-PGPUB; USPAT	OR	OFF	2007/04/25 16:07
S35	1	"7018361".pn.	US-PGPUB; USPAT	OR	OFF	2008/02/05 15:29
S36	1	"6193706".pn.	US-PGPUB; USPAT	OR	OFF	2008/02/05 15:30
S37	1	"6911016".pn.	US-PGPUB; USPAT	OR	OFF	2008/02/05 15:31
S38	1	"20060184109"	US-PGPUB; USPAT	OR	OFF	2008/02/05 15:35
S39	1	("20040220525").PN.	US-PGPUB; USPAT	OR	OFF	2008/02/05 16:05
S40	345	(604/68-69).CCLS.	US-PGPUB; USPAT	OR	OFF	2008/02/05 17:16
S41	1	"5860957".pn.	US-PGPUB; USPAT	OR	OFF	2008/02/06 10:08
S42	1	"6616627".pn.	US-PGPUB; USPAT	OR	OFF	2009/04/03 10:30
S43	1	("20040220525").PN.	US-PGPUB; USPAT	OR	OFF	2009/04/05 16:54
S44	20	("2547099"   "2605763"   "3308818"   "3381403"   "3387609"   "3675651"   "3977401"   "3977402"   "4007739"   "4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"). PN.	US-PGPUB; USPAT	OR	OFF	2009/04/05 18:18

S45	19	US-4596556-\$.DID. OR US-4626244-\$.DID. OR US-4692151-\$.DID. OR US-4717384-\$.DID. OR US-4741737-\$.DID. OR US-4790824-\$.DID. OR US-4820273-\$.DID. OR US-4828548-\$.DID. OR US-4941880-\$.DID. OR US-4966581-\$.DID. OR	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/05 18:21
		US-5061242-\$.DID. OR US-5062834-\$.DID. OR US-5064413-\$.DID. OR US-5147311-\$.DID. OR US-5163909-\$.DID. OR US-5176645-\$.DID. OR US-5179022-\$.DID.				
S46	7	("4573994"   "4666430"   "4773900"   "4913699"   "4940460"   "5041094"   "5088983").PN.	US-PGPUB; USPAT	OR	OFF	2009/04/05 18:26
S47	37	US-5184450-\$.DID. OR US-5224936-\$.DID. OR US-5308335-\$.DID. OR US-5312577-\$.DID. OR US-5399163-\$.DID. OR US-5399163-\$.DID. OR US-5480381-\$.DID. OR US-5492534-\$.DID. OR US-5503627-\$.DID. OR US-5503628-\$.DID. OR US-5520639-\$.DID. OR US-5527288-\$.DID. OR US-5599302-\$.DID. OR US-569189-\$.DID. OR US-5616132-\$.DID. OR US-5618269-\$.DID. OR US-5693017-\$.DID. OR US-5704911-\$.DID. OR US-5730723-\$.DID. OR US-5730723-\$.DID. OR US-5746714-\$.DID. OR US-5846233-\$.DID. OR US-5846233-\$.DID. OR US-5891085-\$.DID. OR US-5891085-\$.DID. OR US-5993412-\$.DID. OR US-5993412-\$.DID. OR US-6063053-\$.DID. OR US-6063053-\$.DID. OR	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/05 18:26

		US-6096002-\$.DID. OR US-6099504-\$.DID.				
S48	15	("5312335"   "5466220"   "5499972"   "5649912"   "5685846"   "5858001"   "5891086"   "5893397"   "5938637"   "5957895"   "6132395"   "6258062"   "6319224"   "20010027290"   "20010027293").PN.	US-PGPUB; USPAT	OR	OFF	2009/04/05 18:33
S49	337	(604/68).CCLS.	US-PGPUB; USPAT	OR	OFF	2009/04/06 09:00
S50	32	("4089334"   "4561856"   "4640445"   "4969874"   "5009637"   "5064413"). PN. OR ("5304128"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/04/06 16:44
S54	1	"4031889".pn.	US-PGPUB; USPAT	OR	OFF	2010/01/05 08:59
S55	1	"5064413".pn.	US-PGPUB; USPAT	OR	OFF	2010/01/05 08:59
S56	<b>16</b> 0	stigell.xa.	US-PGPUB; USPAT	OR	OFF	2010/01/05 09:07
S57	1	"3802430".pn.	US-PGPUB; USPAT	OR	OFF	2010/03/30 11:23
S58	109	("2547099"   "2605763"   "20010027290"   "20010027293"   "3308818"   "3381403"   "3387609"   "3675651"   "3802430"   "3977401"   "3977402"   "4007739"   "4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "496581"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"   "5184450"   "5224936"   "5304128"   "5308335"   "5312335"   "5312577"   "5383851"   "5399163"	US-PGPUB; USPAT	OR	OFF	2010/03/30 11:23

S59		"5466220"   "5480381"   "5492534"   "5499972"   "5503627"   "5503628"   "5520639"   "5527288"   "5569189"   "5599302"   "5618269"   "5649912"   "5618269"   "5649912"   "5685846"   "5693017"   "5704911"   "5730723"   "5746714"   "5782802"   "5814020"   "5836915"   "5846233"   "5851198"   "5846233"   "5851198"   "5891085"   "5891086"   "5893397"   "5919159"   "5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6096002"   "6099504"   "6132395"   "6165155"   "6258062"   "6258063"   "6270473"   "6319224"   "6406455"   "6592542"   "6616027"   "6616627"   "6620135").PN.	US-PGPUB;	OR	OFF	2010/03/31
500	Ť	0002100 .pm	USPAT	010	011	09:41
S60	48	("2322244"   "2322245"   "2514401"   "2575071"   "2669230"   "3308818"   "3335722").PN. OR ("3802430").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/03/31 09:42
S61	1	"5304128".pn.	US-PGPUB; USPAT	OR	OFF	2010/03/31 09:50
S62	34	("4089334"   "4561856"   "4640445"   "4969874"   "5009637"   "5064413"). PN. OR ("5304128"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/03/31 09:51
S63		("2547099"   "2605763"   "20010027290"   "20010027293"   "3308818"   "3381403"   "3387609"   "3675651"   "3802430"   "3977401"   "3977402"   "4007739"   "4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"	US-PGPUB; USPAT; USOCR	OR	OFF	2010/03/31 10:41

S71	439	S70 not S65	US-PGPUB; USPAT	OR	OFF	2010/03/31 14:31
S70	498	(604/140-141,143).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/03/31 14:30
S69	0	01/00346	EPO; DERWENT	OR	OFF	2010/03/31 14:26
S68	0	01/00346	EPO	OR	OFF	2010/03/31 14:26
S67	0	"0100346"	EPO	OR	OFF	2010/03/31 14:26
S66	611	S65 not S64	US-PGPUB; USPAT	OR	OFF	2010/03/31 12:44
S65	616	(604/68-72).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/03/31 12:44
S64 S65	. ,		USPAT			12:44
		"4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"				

S72	435	S71 not S64	US-PGPUB; USPAT	OR	OFF	2010/03/31 14:31
S73	192	(604/145-147).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/03/31 14:51
S74	133	S73 not S70	US-PGPUB; USPAT	OR	OFF	2010/03/31 14:51
S75	130	S74 not S65	US-PGPUB; USPAT	OR	OFF	2010/03/31 14:52
S76	1062	(604/218).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/03/31 14:55
S77	1027	S76 not S64	US-PGPUB; USPAT	OR	OFF	2010/03/31 14:55
S78	1015	S77 not S65	US-PGPUB; USPAT	OR	OFF	2010/03/31 14:55
S79	962	(604/187).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:07
S80	169	(604/190).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:19
S81	189	(604/235,245).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:25
S82	121	(222/251).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:27
S83	343	(222/256).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:29
S84	342	S83 not S82	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:29
S85	63	(222/261).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:33
S86	2843	(222/386,389,325).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:34
S87	1162	(222/386).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:34
S88	931	(222/389).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:45
S89	883	S88 not S87	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:45
S90	1	("6592544").PN.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:52
S91	820	(222/325).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:54
S92	812	S91 not S88	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:54
S93	798	S92 not S87	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:54
S94	503	(222/326).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:54
S95	490	S94 not S91	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:54

S96	432	S95 not S87	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:55
S97	397	S96 not S88	US-PGPUB; USPAT	OR	OFF	2010/04/05 19:55
S98	4505	injection\$2 and syringe\$2 and piston\$2 and gas\$2	US-PGPUB; USPAT	OR	OFF	2010/04/06 09:14
S99	585	S98 and (propel or propellant\$2)	US-PGPUB; USPAT	OR	OFF	2010/04/06 09:14
S100	1256	needleless\$2 same syringe \$2	US-PGPUB; USPAT	OR	OFF	2010/04/06 09:27
S101	195	S100 and piston\$2 and (gas or propellant)	US-PGPUB; USPAT	OR	OFF	2010/04/06 09:28
S102	149	S101 not S99	US-PGPUB; USPAT	OR	OFF	2010/04/06 09:28
S103	339	syringe\$2 and sleeve\$2 and piston\$2 and (gas or propellant) and vent	US-PGPUB; USPAT	OR	OFF	2010/04/06 09:31
S104	327	S103 not S102	US-PGPUB; USPAT	OR	OFF	2010/04/06 09:32
S105	295	S104 not S99	US-PGPUB; USPAT	OR	OFF	2010/04/06 09:32
S106	155	((JOHN) near2 (WILLIS)). INV.	USPAT	OR	OFF	2010/04/06 09:37
S107	7	((THADDEUS) near2 (MINIOR)).INV.	USPAT	OR	OFF	2010/04/06 09:39
S108	18	("3802430"   "5304128"). PN. OR ("6616627"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/04/06 09:40
S109	176	stigell.xa.	US-PGPUB; USPAT	OR	OFF	2010/04/06 09:56
S110	109	("2547099"   "2605763"   "20010027290"   "20010027293"   "3308818"   "3381403"   "3387609"   "3675651"   "3802430"   "3977401"   "3977402"   "4007739"   "4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5061242"   "5062834"	US-PGPUB; USPAT	OR	OFF	2010/04/06 12:12

S116	1	"5064413".pn.	US-PGPUB; USPAT	OR	OFF	2010/04/17 14:30
S115	1	"6616627".pn.	US-PGPUB; USPAT	OR	OFF	2010/04/06 14:43
S114	48	("2322244"   "2322245"   "2514401"   "2575071"   "2669230"   "3308818"   "3335722").PN. OR ("3802430").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/04/06 12:34
S113	1	"3802430".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/04/06 12:33
S112	45	S111 not S110	US-PGPUB; USPAT; USOCR	OR	OFF	2010/04/06 12:29
S111	50	"5893397"   "5919159"   "5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6063053"   "6074360"   "6096002"   "6099504"   "6132395"   "6165155"   "6258062"   "6258063"   "6270473"   "6319224"   "6406455"   "6592542"   "6616027"   "6616627"   "6620135").PN.  ("4790824"   "4941880"   "4944726"   "5024656"   "5064413"   "5147297"   "5389069"   "5484399"   "5531683"   "5549561"   "5597796"   "5669874"   "5700481"   "5779668"   "5971953"   "6096002"   "6319225").PN. OR ("6406455").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/04/06 12:29
		"5814020"   "5836915"   "5846233"   "5851198"   "5858001"   "5860957"   "5891085"   "5891086"				
		"5685846"   "5693017"   "5704911"   "5730723"   "5746714"   "5782802"				
		"5569189"   "5599302"   "5607418"   "5616132"   "5618269"   "5649912"				
		"5492534"   "5499972"   "5503627"   "5503628"   "5520639"   "5527288"				
		"5312335"   "5312577"   "5383851"   "5399163"   "5466220"   "5480381"				
		"5176645"   "5179022"   "5184450"   "5224936"   "5304128"   "5308335"				
		"5064413"   "5088983"   "5147311"   "5163909"				

S117	1	"5304128".pn.	US-PGPUB; USPAT	OR	OFF	2010/04/17 14:43
S118	1	"6406455".pn.	US-PGPUB; USPAT	OR	OFF	2010/04/17 15:00
S119	1	"6616627".pn.	US-PGPUB; USPAT	OR	OFF	2010/07/26 09:52
S120	109	["2547099"   "2605763"   "20010027290"   "20010027293"   "3308818"   "3381403"   "3387609"   "3675651"   "3892430"   "3977401"   "3977402"   "4007739"   "4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"   "5184450"   "5224936"   "5304128"   "5308335"   "5312335"   "5312577"   "5383851"   "5399163"   "5492534"   "5499972"   "5503627"   "5503628"   "5520639"   "5527288"   "5569189"   "5599302"   "5685846"   "5649912"   "5746714"   "5782802"   "5846230"   "5580628"   "5593897"   "559302"   "5846231"   "559302"   "55858062"   "5886957"   "597895"   "5893637"   "597895"   "5893637"   "5936514"   "5782802"   "5846233"   "5851198"   "5957895"   "58938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6063053"   "6074360"   "6096002"   "6099504"   "6132395"   "6165155"   "6258062"   "6258063"	US-PGPUB; USPAT	OR	OFF	2010/07/26 11:36

		"6270473"   "6319224"   "6406455"   "6406455"   "6592542"   "6616027"   "6616627"   "6620135"). PN.	one and a second			
S121	641	(604/68-72).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/26 19:32
S122	172	(604/140).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/26 20:23
S123	152	S122 not S121	US-PGPUB; USPAT	OR	OFF	2010/07/26 20:23
S124	250	(604/141).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/26 20:27
S125	232	S124 not S122	US-PGPUB; USPAT	OR	OFF	2010/07/26 20:27
S126	216	S125 not S121	US-PGPUB; USPAT	OR	OFF	2010/07/26 20:27
S127	123	(604/143).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/26 20:35
S128	194	(604/145-147).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:13
S129	1091	(604/218).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:21
S130	641	(604/68-72).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:22
S131	172	(604/140).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:22
S132	250	(604/141).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:22
S133	123	(604/143).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:22
S134	1076	S129 not S130	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:22
S135	375	(604/181).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:33
S136	996	(604/187).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:38
S137	878	S136 not S129	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:38
S138	813	S137 not S135	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:38
S139	170	(604/190).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:47
S140	0	"pn."	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:49
S141	1	"3802430".pn.	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:50
S142	1	"5304128".pn.	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:50

S143	142	(604/245).CCLS.	US-PGPUB; USPAT	OR OFF		2010/07/27 10:51	
S144	851	piston\$2 and propellant\$2 and sleeve\$2 and (gas or fluid) and drive\$2	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:52	
S145	490	S144 and (align\$4 or match \$2 or "line up")	US-PGPUB; USPAT	OR	OFF	2010/07/27 10:53	
S146	348	(222/256).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 11:00	
S147	216	(222/260-261).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 11:04	
S148	348	(222/256).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 11:07	
S149	123	(222/251).CCLS.	US-PGPUB; USPAT	OR	OFF	2010/07/27 11:08	
S150	355	injection\$2 and needleless \$2 and piston\$2 and gas\$2	US-PGPUB; USPAT	OR	OFF	2010/07/27 11:16	
S151	341	S150 not S131	US-PGPUB; USPAT	OR	OFF	2010/07/27 11:17	
S152	59	("3782380"   "3802430"   "3805783"   "3945383"   "4059107"   "4089334"   "4090512"   "4342310"   "4400171"   "4421508"   "4623332"   "4626242"   "4680027"   "4722728"   "4744786"   "4790824"   "4850967"   "4874367"   "4913699"   "4940460"   "5024656"   "5064413"   "5073165"   "5242406"   "5503637"   "5569189"   "5599302"   "6045534"). PN. OR ("6258062"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/07/27 11:22	
S153	181	propellant\$2 and piston\$2 and sleeve\$2 and moveable \$2	US-PGPUB; USPAT	OR	OFF	2010/07/27 11:35	
S154	156	((JOHN) near2 (WILLIS)). INV.	USPAT	OR	OFF	2010/07/27 11:47	
S155	8	((THADDEUS) near2 (MINIOR)).INV.	USPAT	OR	OFF	2010/07/27 11:50	

"20010027290"   "20010027293"   "3308818"   "3381403"   "3387609"   "3675651"   "3802430"   "3977401"   "3977402"   "4007739"   "4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "51766455"   "5179022"	USPAT			2010/07/27
"3308818"   "3381403"   "3387609"   "3675651"   "3802430"   "3977401"   "3977402"   "4007739"   "4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"				
"3387609"   "3675651"   "3802430"   "3977401"   "3977402"   "4007739"   "4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"				
"3802430"   "3977401"   "3977402"   "4007739"   "4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5064413"   "5088983"   "5147311"   "5163909"				
"3977402"   "4007739"   "4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4965581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"				
"4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4965581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"				
"4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4965581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"				
"4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"4596556"   "4623332"   "4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"4626244"   "4666430"   "4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"4692151"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"4940460"   "4941880"   "4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"4955871"   "4966581"   "5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"5024656"   "5041094"   "5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"5061242"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"				
"5147311"   "5163909"   "5176645"   "5179022"				§
"5176645"   "5179022"				
48		: 1		
**************************************	- 3			
"5184450"   "5224936"				
"5304128"   "5308335"				
"5312335"   "5312577"				
"5383851"   "5399163"				
"5466220"   "5480381"				
"5492534"   "5499972"				
"5503627"   "5503628"				
"5520639"   "5527288"				
"5569189"   "5599302"				
"5607418"   "5616132"				
"5618269"   "5649912"				
"5685846"   "5693017"				
"5704911"   "5730723"				
"5746714"   "5782802"				
"5814020"   "5836915"			***************************************	
"5846233"   "5851198"				
"5858001"   "5860957"				
"5891085"   "5891086"			1	
[["5893397"   "5919159"			***************************************	
45	: §		1	
"5936514"   "5938637"		1		
"5936514"   "5938637"   "5957895"   "5993412"				
"5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"				
"5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6063053"   "6074360"				
"5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6063053"   "6074360"   "6096002"   "6099504"				
"5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6063053"   "6074360"   "6096002"   "6099504"   "6132395"   "6165155"				
"5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6063053"   "6074360"   "6096002"   "6099504"   "6132395"   "6165155"   "6258062"   "6258063"				·
"5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6063053"   "6074360"   "6096002"   "6099504"   "6132395"   "6165155"   "6258062"   "6258063"   "6270473"   "6319224"				, manual man
"5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6063053"   "6074360"   "6096002"   "6099504"   "6132395"   "6165155"   "6258062"   "6258063"   "6270473"   "6319224"   "6406455"   "6406455"				The state of the s
"5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6063053"   "6074360"   "6096002"   "6099504"   "6132395"   "6165155"   "6258062"   "6258063"   "6270473"   "6319224"   "6406455"   "6406455"   "6592542"   "6616027"				annamananananananananananananananananan
"5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6063053"   "6074360"   "6096002"   "6099504"   "6132395"   "6165155"   "6258062"   "6258063"   "6270473"   "6319224"   "6406455"   "6406455"				annamanamanamanamanamanamanamanamanaman
	"5957895"   "5993412"   "6045534"   "6056724"	"6045534"   "6056724"		

S157	198	stigell.xa.	US-PGPUB; USPAT	OR	OFF	2010/07/27 12:22
S158	1	"6406455".pn.	US-PGPUB; USPAT	OR	OFF	2010/07/27 13:50
S159	58	("4790824"   "4941880"   "4944726"   "5024656"   "5064413"   "5147297"   "5389069"   "5484399"   "5531683"   "5549561"   "5597796"   "5669874"   "5700481"   "5779668"   "5971953"   "6096002"   "6319225").PN. OR ("6406455").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/07/27 13:50
S160	109	("2547099"   "2605763"   "20010027293"   "20010027293"   "3308818"   "3381403"   "3387609"   "3675651"   "3802430"   "3977401"   "3977402"   "4007739"   "4031889"   "4059107"   "4089334"   "4124024"   "4177810"   "4233973"   "4265241"   "4299220"   "4338980"   "4360019"   "4539005"   "4573994"   "4596556"   "4623332"   "4626244"   "4717384"   "4741737"   "4773900"   "4790824"   "4820273"   "4828548"   "4913699"   "4940460"   "4941880"   "4955871"   "4966581"   "5064413"   "5062834"   "5064413"   "5062834"   "5064413"   "5088983"   "5147311"   "5163909"   "5176645"   "5179022"   "5184450"   "5224936"   "5304128"   "5308335"   "5312335"   "5312577"   "5383851"   "5399163"   "5466220"   "5480381"   "5492534"   "5599302"   "5503627"   "5503628"   "5503627"   "5503628"   "5503627"   "5503628"   "5520639"   "5527288"   "5569189"   "5599302"   "5607418"   "5649912"   "5688846"   "5693017"   "5704911"   "5730723"   "5746714"   "5782802"   "5846233"   "5851198"   "5846233"   "58851198"   "5846233"   "58851198"   "5886030"   "58860957"   "5891085"   "5891086"	US-PGPUB; USPAT	OR	OFF	2010/07/29 11:18

		"5893397"   "5919159"   "5936514"   "5938637"   "5957895"   "5993412"   "6045534"   "6056724"   "6063053"   "6074360"   "6096002"   "6099504"   "6132395"   "6165155"   "6258062"   "6258063"   "6270473"   "6319224"   "6406455"   "6406455"   "6592542"   "6616027"   "6616627"   "6620135"). PN.				ananamanananananananananananananananana
S161	31394	piston\$2 and sleeve\$2 and (opening\$2 or hole\$2 or port\$2) and align\$2	US-PGPUB; USPAT	OR	OFF	2010/07/29 11:27
S162	21141	S161 and fluid\$2 and (slid \$3 or mov\$3)	US-PGPUB; USPAT	OR	OFF	2010/07/29 11:27
S163	9058	S162 and (gas\$2 or propellant\$2 or propel\$2)	US-PGPUB; USPAT	OR	OFF	2010/07/29 11:29
S164	2769	S163 and vent\$2	US-PGPUB; USPAT			2010/07/29 11:30
S165	1238	S164 and (syringe\$2 or needleless\$2 or injection \$2)	US-PGPUB; OR OF USPAT		OFF	2010/07/29 11:30
S166	1	"6616627".pn.	US-PGPUB; USPAT	OR	OFF	2010/07/29 11:36
S167	24	("3802430"   "5304128"). PN. OR ("6616627"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/07/29 11:36
S168	1	"7611489".pn.	US-PGPUB; USPAT	OR	OFF	2010/07/29 11:59
S169	199	stigell.xa.	US-PGPUB; USPAT	OR	OFF	2010/08/03 07:03
S170	1	"6406455".pn.	US-PGPUB; USPAT	OR	OFF	2010/08/03 08:04
S171	58	("4790824"   "4941880"   "4944726"   "5024656"   "5064413"   "5147297"   "5389069"   "5484399"   "5531683"   "5549561"   "5597796"   "5669874"   "5700481"   "5779668"   "5971953"   "6096002"   "6319225").PN. OR ("6406455").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/08/03 08:06

S172	114	("2547099"   "2605763"		OR	OFF	2010/08/03
		"20010027290" l	USPAT; USOCR			08:14
		"20010027293" l				
		"3308818"   "3381403"	: 5			
		"3387609"   "3675651"				
		"3802430"   "3977401"	: 5			
		"3977402"   "4007739"	: 1			
		"4031889"   "4059107"				
		"4089334"   "4124024"		į		
		"4177810"   "4233973"	- 5			
		"4265241"   "4299220"				
		"4338980"   "4360019"				
		"4539005"   "4573994"				
		"4596556"   "4623332"				
		"4626244"   "4666430"				
		"4692151"   "4717384"				
		"4741737"   "4773900"				
		"4790824"   "4820273"				
		"4828548"   "4913699"			3	
		"4940460"   "4941880"			2222	
		"4955871"   "4966581"				
		"5024656"   "5041094"	- 3		3333	
		"5061242"   "5062834"				
		"5064413"   "5088983"				
		"5147311"   "5163909"				
		"5176645"   "5179022"	- 5			
		"5184450"   "5224936"	- 3			
		"5304128"   "5308335"	: 3			
		"5312335"   "5312577"	: 5			
		"5383851"   "5399163"	- 5			
		"5466220"   "5480381"	- 5			
		"5492534"   "5499972"	• •			
		"5503627"   "5503628"	- 5			
		"5520639"   "5527288"	- 5			
		"5569189"   "5599302"	: {			
		"5607418"   "5616132"	: 5			
		"5618269"   "5649912"	: }			
		"5685846"   "5693017"				
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		"5746714"   "5782802"				
		"5814020"   "5836915"	: }			
		"5846233"   "5851198"			33	
		"5858001"   "5860957"			3	
		"5891085"   "5891086"				
		"5893397"   "5919159"				
		"5936514"   "5938637"	: 1			
		"5957895"   "5993412"				
		"6045534"   "6056724"	: 5			
		"6063053"   "6074360"				
		"6096002"   "6099504"	: }			
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		"6258062"   "6258063"	- 3		1	
		"6270473"   "6319224"	- 3			
		"6406455"   "6406455"	- 3		333	
		"6592542"   "6616027"	- 5		3333	
		"6616627"   "6620135").	- 5		3	
		PN.			333	
ś	\$	} <u>+</u> + • •	: §	: §	1.5	:

S173	37 ("4089334"   "4561856"	US-PGPUB;	OR	OFF	2010/08/03
	"4640445"   "4969874"	USPAT; USOCR			08:20
	"5009637"   "5064413").				
	PN. OR ("5304128").				
	URPN.				

## EAST Search History (Interference)

Ref#	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	1	(604/141,69).CCLS.	UPAD	OR	OFF	2010/08/11 12:02
L4	1	(604/141,69).CCLS.	UPAD	OR	OFF	2010/08/11 12:02

## 8/11/2010 12:04:04 PM

 $C: \label{lem:commutation} C: \label{lem:commutation} LAST \label{lem:commutation} Workspaces \label{lem:commutation} 10658116. wsp$